EPA-PNL-2139

Phil North/R10/USEPA/US

To "Walker, Coowe (DFG)"

11/05/2012 08:01 PM

cc bcc

Subject Re: 'Salmon in the Hills'-end of field season sumary

Hi Coowe,

It sounds like you had another fun summer. It is really great that you are continuing this research. I see your work cited in documents used to evaluate development projects like Pebble and Chuitna. You are really advancing the science. Thanks.

Are you sure the "stonefly" is not a beetle larva?

Phil

Phillip North
Environmental Protection Agency
Kenai River Center
514 Funny River Road
Soldotna, Alaska 99669
(907) 714-2483
fax 260-5992
north.phil@epa.gov

"To protect your rivers, protect your mountains."

"Walker, Coowe (DFG)" Hi folks, Happy November to you! We had... 11/05/2012 02:03:16 PM "Walker, Coowe (DFG)" <coowe.walker@alaska.gov> From: To: "Walker, Coowe (DFG)" <coowe.walker@alaska.gov>, " (dglass@ciri.com)" <dglass@ciri.com>, " (wspegau@pwssc.org)" <wspegau@pwssc.org>, "Alderfer, Amy L (DFG)" <amy.alderfer@alaska.gov>, Amanda E Rosenberger <rosenberger@sfos.uaf.edu>, "andjr@uaa.alaska.edu" <andjr@uaa.alaska.edu>, "Badajos, Oriana H (DFG)" <oriana.badajos@alaska.gov>, "Baird, Steve J (DFG)" <steve.baird@alaska.gov>, "Bangs, Peter D (DFG)" <peter.bangs@alaska.gov>, Becky Shaftel , Bob Shavelson (DFG)" <catie.bursch@alaska.gov>, "Kerkvliet, Carol M (DFG)" <carol.kerkvliet@alaska.gov>, "Casey, Dave C POA02" <Dave.C.Casey@poa02.usace.army.mil>, 'Christophe Vieira' , Christy Tyler <actsbi@rit.edu>, "Cooney, Kimberly A (DFG)" <kim.cooney@alaska.gov>, "Craig, Adam J (DFG)" <adam.craig@alaska.gov>, "Curtis, Cecelia G (DFG)" <cecelia.curtis@alaska.gov>, "Doroff, Angela M (DFG)" <angela.doroff@alaska.gov> "Dunker, Kristine J (DFG)" <kristine.dunker@alaska.gov>, "Ed Berg , "Erickson, Jack W (DFG)" <jack.erickson@alaska.gov>, "Field, Carmen M (DFG)" <carmen.field@alaska.gov>, "Geoff Coble ("Hasbrouck, James J (DFG)" <james.hasbrouck@alaska.gov>, Janet Fink "Jeanne Hanson (jeanne.hanson@noaa.gov)" < jeanne.hanson@noaa.gov> "Jeffry_Anderson@fws.gov" < Jeffry_Anderson@fws.gov>, "Meehan, Joe (DFG)" <joe.meehan@alaska.gov>, "Joe Spaeder John Czarnezki <jczarn@borough.kenai.ak.us>. iohanna spaeder Kachemak Bay Conservation Society < , "klb1354@rit.edu" <klb1354@rit.edu>, "kris.holderied@noaa.gov" <kris.holderied@noaa.gov>, "Evans, Lisa B (DFG)" lisa.evans@alaska.gov>, "Litchfield, Virgina" <IMCEAEX-_O=SOA_OU=First+20Administrative+20Group_cn=Recipients_cn=VirginaLitchfield@</p>

alaska.gov>, "Imckinley@borough.kenai.ak.us" <lmckinley@borough.kenai.ak.us>, "lynnda_kahn@fws.gov" <lynnda_kahn@fws.gov>, "Maas, Deborah F (DFG)"

<debbie.maas@alaska.gov>, "Margi Blanding

, "marie@kachemaklandtrust.org"

<marie@kachemaklandtrust.org>, "Maurer, Jasmine R (DFG)" <jasmine.maurer@alaska.gov>,
"Murphy, Andrea M (DPS)" <megan.murphy@alaska.gov>, 'Michael Callahan'
<mkcallah@mail.usf.edu>, Michelle Gutsch <mkgutsch@alaska.edu>, "Mike Gracz
[mike@kenaiwatershed.org]" <mike@kenaiwatershed.org>, "Mungoven, Mike - Homer, AK"
<mike.mungoven@ak.usda.gov>, "Nina.Garfield@noaa.gov" <Nina.Garfield@noaa.gov>, Phil
North/R10/USEPA/US@EPA, "Rains, Mark" <mrains@cas.usf.edu>, "rhagenstein@tnc.org"
<rhagenstein@tnc.org>, "Clark, Robert A (DFG)" <bob.clark@alaska.gov>, "Piorkowski, Robert J
(DFG)" <robert.piorkowski@alaska.gov>, Robert Ruffner <robert@kenaiwatershed.org>, "Ryan,
Jessica A (DFG)" <jessica.ryan@alaska.gov>, "Ryan_S_King@baylor.edu"
<Ryan_S_King@baylor.edu>, Sue Mauger <sue@inletkeeper.org>, Tammy Hoem
omegalaska.edu>, 'Tara Schmidt' <tara@homerswcd.org>, "Otis, Ted (DFG)"
<ted.otis@alaska.gov>, "Thompson, Richard B (DNR)" <ri>richard.thompson@alaska.gov>,
"Thompson, Terry S (DFG)" <terry.thompson@alaska.gov>, "Whigham, Dennis"

<whighamd@si.edu>, Lyn Jacobs

Date: 11/05/2012 02:03 PM

Subject: 'Salmon in the Hills'-end of field season sumary

Hi folks,

Happy November to you! We had a busy field season, beginning last April and continuing through mid October for our 'Salmon in Hills' research. Our primary goal for this phase of the project was to PIT tag as many juvenile Dolly Varden and coho as possible at 5 different sites. We established antennaes for detecting PIT tags at each of these sites, and these antennaes will remain in place through the winter. These sites represent a range of gradients and associated habitats, and we are hoping to see movement between habitat types. The fish were noticeably later in emerging than in previous years of sampling these headwaters. This meant that fewer fish grew to 'taggable' size than we anticipated. However we were able to tag almost 1000 juvenile salmonids (998), and measure and release almost 1800 smaller salmonids that were too small to tag.

In September, we experienced heavy rainfall, and our study streams became lakes. We saw juvenile fish swimming across the road at one site! None-the-less, the antennaes remained functioning for the most part, and they are now "iced in" and ready to weather the winter. It will be very interesting to learn what these juvenile fish do in the winter and spring, as they prepare to outmigrate, or spend another summer rearing.

I am attaching a few images from the season. Look for the solar panels on the 'Flood 2012' image- they are next to what was the 'normal' channel before the flooding. The high gradient stream in the image was previously undocumented as habitat for salmon. We did find juvenile coho in the stream, and have nominated it to the anadromous stream catalog. The image of the low gradient stream is a landscape that looks like a grassy meadow, and it is not all obvious that there is a stream chock full of juvenile Dollies and coho flowing through it-but there is!

These efforts are funded through a grant from the Alaska Sustainable Salmon Fund, with additional support from KBRR, Baylor University, and the Rochester Institute of Technology. Special thanks to the Castellani family, the Trimble family, Cook Inlet Regional Incorporation, and the University of Alaska, for graciously giving us permission to use their property for this research.

Take care, Coowe Coowe Walker Kachemak Bay Research Reserve 95 Sterling Highway, Suite 2 Homer, AK 99603 907.226.4651

[attachment "stonefly headstand.JPG" deleted by Phil North/R10/USEPA/US] [attachment "Flood 2012 STARlow.JPG" deleted by Phil North/R10/USEPA/US] [attachment "high gradient stream.JPG" deleted by Phil North/R10/USEPA/US] [attachment "Kristen with steelhead(4).JPG" deleted by Phil North/R10/USEPA/US] [attachment "low gradient stream2.JPG" deleted by Phil North/R10/USEPA/US] [attachment "low gradient stream.JPG" deleted by Phil North/R10/USEPA/US]